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ABSTRACT

An expansion of suggestions provided to beginning graduate students who plan to function as teaching assistants is presented. Suggestions fall into the major categories of: advice from over 100 beginning teachers who just finished their first year of teaching; needed information at the beginning of the teaching term; shifting pre-lesson overviews and post-lesson reviews from the teacher to the students; obtaining feedback about teaching; and testing and grading. All of the suggestions involve providing, soliciting, and/or using information to help improve teaching while improving student learning. Students may learn more if they are asked to: review previous lessons; provide information about their attitudes toward or understanding of upcoming lessons; and summarize or expand upon the lessons just completed. Teachers may improve their instruction by asking students or others to provide a few, simple, possible suggestions for improvements. Although evaluations of students or teachers may be used to grade, evaluation should be used primarily to improve learning by students and their teachers. Three appendices are: a scale for evaluating essays and papers; examples of class description pages for two classes, a student information form, and a post-class recommendation/information form; and a summative ratings sheet. Contains 13 references. (SM)

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EVALUATION THAT IMPROVES TEACHING
(or Better Feedback and Better Testing for Better Teaching)

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A presentation for the Graduate Student
Orientation Program, BGSU, Bowling Green
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EVALUATION THAT IMPROVES TEACHING

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Abstract

This paper is an expansion of suggestions provided to beginning graduate students who planned to function as teaching assistants. The five sets of suggestions included: (1) suggestions that graduate students obtain as much teaching experience as possible while observing and discussing their own teaching and that of as many others as possible; (2) solicit student information and provide course descriptions during the first period of their classes; (3) ask students to preview and review their classes as often as possible; (4) ask students and colleagues to provide suggestions for teaching improvement; and (5) employ testing and grading procedures likely to lead to more valid tests and greater student learning. Each set of suggestions included brief descriptions of procedures that could be employed by a beginning teacher of college students.

A presentation for the Graduate Student Orientation Program, BGSU,
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EVALUATION THAT IMPROVES TEACHING

Teaching usually is the most enjoyable, and the most frustrating, professional activity engaged in by college faculty and by graduate students. The enjoyment comes from helping people to learn and to value what you value and believe important. The frustration comes from rarely doing as well as you could.

The primary purpose of this presentation is to provide suggestions to those graduate students who will function as teachers. These suggestions fall into several major categories:

- 1) Advice from over 100 beginning teachers who just finished their first year of teaching;
- 2) Suggestions for needed information at the beginning of the teaching term;
- 3) Suggestions for shifting pre-lesson overviews and post-lesson reviews from the teacher to the students;
- 4) Suggestions for obtaining feedback about your own teaching;
and
- 5) Suggestions for testing and grading.

All of the suggestions involve providing, soliciting, and/or using information to assist you to improve your own teaching while also improving the learning of your students. Some of these ideas will be highlighted in the presentation, but all are explained in this booklet. Additional references are available for those interested in learning more about these techniques and ideas.

Part I: Advice from First-Year TeachersAdvice to Graduate Students

In 1984, L. Dee Fink reported the advice of over 100 people who had just completed their first year as college teachers. Not surprisingly, the four suggestions that stood out most prominently were:

1. Obtain more and better teaching experience while you are a graduate student;
2. Learn as much about teaching as you can;
3. Find out if teaching is really what you want to do; and
4. Complete your dissertation before you take a college teaching position.

These beginning faculty were looking back at their graduate preparation and also looking at the demands of their first year as college faculty and saying: I wish I had better prepared myself to be an effective teacher. Their suggestions for graduate students ranged from teaching an entire course--or at least becoming a guest lecturer--to carefully observing a range of outstanding and/or innovative teachers. They suggested that people who plan to become college teachers--or any kinds of teacher--should do everything and anything that would assist them to understand teaching and their own roles as teachers. Those who could teach an independent course should do so. But all should volunteer to: (1) present guest lectures; (2) read about teaching and learning; (3) observe teachers in all fields; (4) discuss teaching and learning with faculty and with colleagues; (5) take classes and seminars dealing with teaching; and

(6) have their lessons or presentations video and audio taped as a focus of analysis and for discussion with others.

In summary: people who planned to become teachers should: gain experience; ask for feedback; identify and observe model teachers; develop a conceptualization of teaching; and determine if teaching is something they really wish to do.

Advice for Beginning Teachers

Dee Fink's first year teachers also had advice for other beginning teachers. Their six major suggestions were:

- 1) Prepare as much as possible in advance--be ready with lectures, teaching aids, course outlines--get more than a week (or a day) ahead.
- 2) Be prepared to work long and hard, "You are going to work harder...than you ever have in your life." "Get well rested the summer before." Be sure to get enough sleep and enough exercise.
- 3) "Be flexible but firm." "Prepare well beforehand so you can be flexible in your approach."
- 4) Realize that you will make mistakes. "Know that you will blow it sometimes and get depressed." "Try to relax and avoid letting anxiety get out of control." "Expect that many things will not go as planned, and then just roll with the punches and adapt."
- 5) Learn about yourself as a teacher and about teaching. "Get experience and evaluate it." "Try to sit in other teacher's classes."
- 6) GET TO KNOW YOUR STUDENTS. "Stay in touch with your students. Always listen to them and watch their reactions. They are better critics than we usually admit." "Do not overlook, if teaching introductory level courses, the great gulf there may be between your

taken-for-granted general knowledge and the restricted life/world experiences of the ex-high school kids you're going to teach."

The second section of this presentation focuses upon "getting to know your students" while also informing them as to your goals and expectations.

Part II: Beginning a Two-way Communication

System--The First Days of Class

The Teacher's Roles

The teacher's three roles as: (1) Clear, Concise Communicator; (2) Comfortable, Confident, Caring Courteous Creator of Rapport; and (3) Course Coordinator and manager of texts, tests, assignments, a-v-equipment and the multiple components of a course--all benefit from regular, interactive communication with students. The communicator begins the first day of class with the syllabi, assignments and course descriptions presented by the teacher and with the teacher's gathering of information about the students in the class. A considerable flow of less formal information also takes place as students try to assess course difficulty and relevance, teacher expectations and style, and the characteristics of the other students. Teachers tend to be more tuned to the demands of their preplanned presentation, but even teachers gain general impressions of individual students and of the class as a unit. As the class moves on, teachers get additional feedback from student questions, test answers, discussion comments, attendance, completion of assignments, management problems and body language. However useful this informal feedback, teachers should augment their information gathering with more structured procedures.

The remainder of this section provides some suggestions to permit more complete and accurate, informal feedback to the teacher. The later sections describe tests, grades and ratings approaches that produce more formal, summative feedback to all involved.

Beginning the Term: Feedback to and from Your Students

1. Student Information Form. Many teachers begin their first day of class by asking students to answer questions about themselves. A typical "Student Information" form is attached in the appendix. Questions usually focus upon the academic and life experiences of the students. Some teachers also ask for student goals for the course or opinions about key course topics. A common rule of teaching is to provide several specific examples of each new idea, and teachers can use information about their students in their choices of illustrative examples of important ideas.

2. Course Descriptions. Students often have a limited period of time in which to change their course schedules and need to know the basic nature and typical demands of the courses they have initially chosen. Teachers can provide much of this information via a brief, written description of the course, its major topics, its grading policy and procedures, and its major requirements and expectations. A copy of a typical description is attached. Although some teachers also distribute a day-by-day schedule of activities, topics and assignments, other teachers wait a few days to determine the general pace of the class. Most responsible teachers provide more-than-necessary, advance warning of all time-consuming activities such as tests, trips or projects.

3. Names. Teachers usually write their own names on the board, include them in initial handouts, and sometimes inform students as to the name they prefer to be referred to in class. The great majority of faculty interviewed for a recent student project reported that it was very important for teachers to learn student names--and many believed that it was useful for students to know and use the names of other students in the class. However, only a minority used any organized system to remember student names. Some name-remembering systems that were suggested included: name tags on students or on their desks; use of seating charts; taking and reviewing pictures of students; passing back work by name (to force the teacher to use and remember names); various name-games; and assigning several student names each day for the entire class to remember. Many teachers and students believe that the use of names improves rapport and a sense of belonging.

4. Office Hours. Most teachers assign themselves specific hours in which they are available in their offices for discussions with students. Students are informed of these hours in writing, orally, and by cards on the office and/or classroom doors. As unavoidable schedule changes arise, all students should be informed of the changes in office hours. Warning. Students really resent going to the trouble of visiting a teacher's office only to find no one there and no note telling where the teacher is. If you have to miss your office hours, inform your students, if possible, and note the change on your office door.

5. Phone Numbers. Most teachers provide office phone numbers, departmental office phone numbers and, even, home phone numbers to

their students. Although students rarely call faculty at home, the availability of this option often relieves student stress and anxiety.

6. Sharing Student Names and Phone Numbers. Some faculty ask students to gather the names and phone numbers of several other students in the class. While no students can be obligated to provide this information to other students, most do provide names and numbers and are willing to answer other student's questions about the class, upcoming assignment or other class-related areas of concern. Students who miss a class or fail to understand a presentation or an assignment can usually obtain help and support from other students--if they have their names and phone numbers.

7. Course Objectives and Goals. While many teachers distribute a list of major course objectives, goals or content areas, some also ask students to list and briefly describe their major (three to five) goals or objectives for the class. Such a listing usually takes 5 to 10 minutes of class time. A few more minutes could be used for students to rank-order their list in terms of importance (if you could only accomplish one goal, which would it be... if you had time for two... three, etc.). The teacher could take the lists home, analyze the goals, and report the results later--or do an in-class analysis of the goals of individuals or of small groups. The activity could be repeated at midterm and endterm to determine goal shifts and the increased ability of students to identify and express goals. Teachers may modify their courses as appropriate, but SHOULD clearly inform students as to what the course goals will be--soon enough to permit students to make informed choices about staying in or leaving the course (and registering for a replacement). Warnings: Some students

may not have clear goals; some may resent being asked as they believe it is the teacher's responsibility to determine course goals; and still others may have goals that the teacher is not able or willing to accept or promote.

The "Discipline Issue." Most college faculty do not face the types of "discipline" problems faced by many pre-college teachers. However, there may be students who read newspapers, cross-talk, doze or come in late during your most important presentations. These behaviors can be disconcerting to the teacher and may be distracting to the rest of the class. Most of these problems can be handled by: (1) explaining the late (come in quietly), cross-talk (raise hands), or attention procedures in advance; (2) making your class more active (as suggested in the next few pages); (3) calling on someone or walking toward someone who is near the "offender"; or (4) if necessary, privately describing your problem to the "offender" and asking for their help in reaching some mutually-acceptable resolution. Warning: Public embarrassment for minor irritations is usually inappropriate, discourteous, and counter-productive.

Part III: Improving Learning Through Monitoring and Evaluation

Cognitive psychologists, behavioral psychologists and experienced teachers all tend to believe that active learning is superior to passive learning. Teaching which permits students to organize and reorganize their understanding--or activate and actively modify their habit hierarchies or behaviors--tends to be more effective teaching. David Ausubel (1968) focused upon the pre-teaching need for student input when he wrote: "The most important single factor influencing

learning is what the learner already knows.... Ascertain this fact and teach him accordingly." Others have focused more attention upon post-learning practice and correction.

The suggestions in this section represent approaches that teachers could employ to cause students to become more active participants in their own learning. The first and third components of the old three-part teaching sequence: (1) Overview ("Tell them what you are going to tell them."); (2) Teach ("Tell them."); (3) Review ("Tell them what you told them.")--can be shared with the student. The students can be asked to review the previous lesson, overview what they know about the current or new topic and review the lesson after it has been presented.

Some approaches to teaching also make students full partners of the middle section of this three-part system (e.g., Cross-Age or Peer Tutoring, Cooperative Learning Groups, Inquiry Learning, etc.), but these techniques lie beyond the scope of this presentation. Pat Cross and T. A. Angelo (see the bibliography) also suggest a series of activities that ask students to go beyond organizing lesson content. They also suggest that students examine and possibly modify their own strategies for learning. They focus upon "metacognitive" skills as well as cognitive skills.

8. Pre-learning Activities. Before introducing a new topic, ask students to spend 5 to 10 minutes defining and/or giving examples of the key terms or concepts--or answering a few multiple-choice questions--or listing related concepts or terms--or describing the importance of the topic--or telling you what they know about the topic. The assignment could be completed in class or outside of

class. The results could be categorized as reflecting: (1) little or much error; (2) little or much understanding; or (3) little to much perceived value. The analysis of the results could be performed later by the teacher or in class by small-group or whole class responses.

Advantages: These activities may permit the instructor to modify the presentation while assisting students to connect new ideas with old ones.

9. Pre-learning review. Before a new class, students are asked to spend 5 minutes listing the major points of the previous lesson. Small groups compare lists and report the key points to the teacher.

10. Mid-presentation Written Summary. After from 15 to 30 minutes of a class, ask students to spend 3 to 5 minutes: (1) listing and briefly describing what they just learned; or (2) describing the importance or implications of what they just learned; or (3) describing what they were just thinking about (whether or not it was related to the class). These comments could be written on one-side of half of a page or on cards passed out at the beginning of class. Comments should be unsigned and could be analyzed by the teacher, by small groups, or by the whole class. The teacher should report highlights and implications to the class as soon as possible.

11. Mid or End Presentation Questions. Neil Browne (BCSU-Economics) and Stuart Keeley (BCSU-Psychology) also suggest (1985) that teachers take frequent breaks in lectures or discussions to ask students to summarize or explain the significance of what was just said. They suggested that teachers ask frequent questions during class--and "found the following set of questions particularly useful:

1. What is the conclusion or main point?

2. What are the reasons or evidence?
3. What are the elements of ambiguity?
4. What assumptions are being made?
5. How convincing are the reasons or evidence?
6. What value priorities are evident?
7. Is there important missing evidence?"

Browne and Keeley also list three useless, but common questions:

1. Does everyone understand?
2. Have I made myself clear?
3. Are there any questions?

12. The 30-30 Class. Some teachers--especially those teaching workshops or skill courses--divide each 60 minute hour into two parts. The first 25 or thirty minutes is devoted to the teacher's presentation or demonstration of some idea or skill. The remainder of the class is used to permit the students to solve one or more problems, answer a set of questions, or apply the skill to some new situation. In most cases, small groups (2 to 4 students) are presented with questions or problems that students: (1) solve individually; (2) share and compare with the group; and (3) report to the entire class. The reporting function is rotated among members of the group with the expectations that: (1) ALL members of a group understand the answer; and (2) that ALL members of a group will report at one time or another. Sometimes a numbered set of problems is given to all groups with the request that groups 1 and 2 begin with problem 1, groups 3 and 4 begin with problem 2, etc. Each group completely solves at least one problem and also hears the description of another group's thoughts concerning the same problem. All groups

also hear solutions to several similar problems and are free to comment upon them.

13. The Learning Log or Journal. K. Patricia Cross and Thomas Angelo have described 30 Classroom Assessment Techniques (1988). Technique number 22 is the "Learning Log." Students are asked to "keep a record of each class or assignment." For each class, students are to list: (1) the major points learned from the lesson (with examples as appropriate); (2) the major points or ideas that are unclear; and (3) a few questions that must be answered before the lesson could be understood completely. For each assignment or test, students are asked to briefly describe: (1) the assignment or test; (2) one or two examples of their success in the activity--and why these answers or procedures were successful; (3) one or two examples of problems or less successful answers or procedures--and what went wrong; and (4) suggestions for increasing their own learning in similar, future situations. The logs are believed to be most useful in classes that provide repeated opportunities to work on similar tasks (such as math, languages, music, lab sciences, accounting, computer science, dance, and athletics). The authors suggest that: (1) copies of the logs should be collected and returned the first time(s) they are used (to clarify procedures); and (2) subsequent collections (of Xerox copies) occur monthly or at natural breaks in the term. The teacher's work could be spread out by collecting a few logs each class or each week. Warnings: (1) the procedure is time consuming for all involved; and (2) self-assessment is difficult for many students and requires positive guidance from the teacher.

14. Post-class Essay. Some teachers ask students to produce a one- or two-page, post-class essay that describes their responses to the class. The essays can be structured to focus upon cognitive or attitudinal responses--or both--or student choice. The teacher skims the responses and reports upon a few at the beginning of the next class. Teachers may respond to some or all of the comments. Grades or points may be assigned to anyone who completes an essay--regardless of quality. Some teachers use their responses to student comments to develop a dialogue with their students.

15. Whole class responses. Many teachers interrupt lessons or complete lessons by asking the entire class to answer one or more simple, two or three option questions. For example, all who agree with answer 1, hold up one finger; two fingers for answer 2; 3 for answer 3, etc. True-false questions could be responded to with open or closed hands, etc.

Summary. The true test of teacher clarity is student understanding. Each of the preceding activities inform teachers and students if lessons have been learned.

Part IV: Feedback from Observers

Another way of monitoring teaching is to ask others for their opinions and suggestions. Some common approaches follow.

1. Colleague examination of materials. Ask one or more competent and trusted colleagues to review your teaching materials and tests before you produce final copies for your students. Putting initial drafts on a word processor permits easy revision.

2. Cross-visitation of classes. L. Dee Fink (1984) strongly suggested that graduate students visit and view as many innovative or excellent teachers as possible. These visits can be made more worthwhile if you discuss what you saw with a colleague/co-visitor and/or ask the visited teachers to explain and discuss their lessons.

The next step is to invite a trusted colleague to visit your class and listen to your explanations of what you did and why you did it. As your confidence increases, you might invite your colleague to share opinions as to: (1) strengths, (2) weaknesses (only one or two at first); and (3) one or two possible modifications of the lesson.

3. Student opinion cards. After selected lessons or assignments, ask students to provide (briefly and anonymously) opinions concerning: (1) the lesson's strengths; (2) any weaknesses; and (3) one or two suggestions for needed improvements. You can hand out cards or half-sheets of paper and tell students your plans at the beginning of the class. Suggestions: (1) Don't get defensive; (2) thank your students for their opinions; (3) report the major results to the students as soon as possible (next class?); and (4) don't make promises (to change) that you can't or won't keep.

4. Bi-lesson or midterm ratings. Some teachers hand out brief (2 to 5 multiple choice questions with space for comments) or semi-brief (one page or less) ratings scales for each class, for some classes, after several classes or at midterm. Results should be shared with the class as soon as possible.

5. Small-Group-Instructional Development (SGID). Several universities suggest that faculty engage in a mid-term feedback system originally created by Joe Clarke of Oregon. A colleague is chosen to:

(1) interview the teacher about course goals and procedures; (2) visit the class for from 30 to 50 minutes around midterm; (3) gather information from the students; and (4) report the student opinions back to the teacher. The opinion-gathering process involves: (1) explaining the procedure and purpose to the students; (2) dividing the class into groups of from 5 to 6 students; (3) appointing a recorder-reporter in each group; (4) asking each group to produce an answer to 3 questions; and (5) asking groups to report their answers to the colleague who solicits verification from other groups and records summaries of the most agreed-upon answers. The three questions are: (1) What works well in this class-course and should not be changed? (2) What doesn't work as well or tends to block learning? (3) What specific changes should be made? After the post-class discussion with the colleague, the teacher decides which changes, if any, will be made, thanks the colleague and the students, and reports the changes to be made to the class--as soon as possible.

Several video-tape descriptions of this process have been made and two are available for showing via closed-circuit TV at BGSU and at Miami University of Ohio. Although the teacher or a class student can function as the solicitor of information, the SGID procedure seems to work better if a colleague visits the class while the teacher is not in the room. Class students could substitute for the colleague but may have difficulty in filling this complex role.

6. Audio-taping or Video-taping Your Class. Faculty can benefit from taping a class and reviewing the tape. Improvement seems more likely if: (1) a rating scale is used to aid focus upon specific actions or events; (2) a colleague shares the experience with you and

the results and possible implications are discussed; and (3) only one (or two) changes are undertaken at any one time. Most people who view or hear themselves for the first time tend to be shocked and disappointed by what they see and hear. It often takes several tapings and viewings before one can begin to ignore the surface externals and see or hear the person that others have seen or heard for years.

7. Class Voting: Some procedural decisions can be made by simple class votes--either shows of hands or secret ballots. It is not usually appropriate to ask for class votes to change pre-established schedules or requirements unless either (1) all students agree without duress; or (2) disagreeing students are permitted to keep to the times or obligations originally specified when the class first met (part of the initial understanding that caused them to remain in the class).

8. End-term Student Ratings. Many departments ask faculty to solicit end-term student opinions through use of a common ratings questionnaire. The department may use the numerical results of the most general questions to evaluate the success of the teacher--and to make merit pay or other personnel decisions. The answers to more specific questions may provide the teacher with some suggestions for improvement. However, without interaction with a colleague-advisor, the results of most ratings scales are too late, too confusing, and too nonprescriptive to lead to much subsequent improvement (see Cohen, 1980 for a analysis of the effectiveness of end-term ratings). Most teachers would be better advised to take some additional time to ask the three questions used in the SGID procedure (What's good? What's

Bad? What specific improvements would you suggest?). Other teachers could augment the departmental scale with requests for student evaluation of specific movies, materials, lessons, objectives or other specific components of the class. If this specific and additional evaluation is made somewhat before the end of the class, and is analyzed by the instructor, its results might be of use in planning for the next academic term.

Summary. Students and visiting (or viewing) colleagues can be valuable guides to instructional improvement. Unfortunately, their suggestions may be too confusing, too diverse, and too "unrealistic" to be used—and asking for their advice may be too time consuming or uncomfortable. Improvement is most likely to occur if one or more trusted, empathic colleagues form partnerships to assist with the sorting out of the appropriate and inappropriate possible improvements.

Part V: Formal, Summative Tests and Grades

The great majority of classroom evaluation should be focused upon improving learning and instruction through: (1) clarifying expectations, goals, objectives and procedures; (2) identifying initial student positions; (3) identifying failures to communicate or understand; and (4) identifying areas for student or instructional improvement. However, many teaching situations require teachers to produce a formal and final/summative assessment of student understanding that can be recorded as a grade.

The following list provides suggestions for testing and for grading.

1. Discuss departmental and course grading policies with more experienced colleagues--both to obtain good ideas and to attempt to assure the use of similar and reasonable standards across different classes.

2. Describe the course grading policy and procedures--orally and in writing--during the first class period. Include a description of all graded assignments and tests, their due or scheduled dates, and the exact procedures used to determine the final grade. Discuss your reasoning as appropriate.

3. Provide students with at least one trial or practice test before they are likely to concentrate their study for the first graded test. Correct the test and explain the scoring systems, directions and likely time limits. An example is usually clearer than a description.

4. Match your test questions and other graded assignments to the major course objective, to the level of understanding you required in your non-graded assessment, and to the percentage of time allocated to the skill or topic. It is inappropriate to ask "fact-level" questions in class and "application" or "analysis-level" questions on exams. It is equally inappropriate to focus considerable attention to certain topics in class and ignore them on the examinations--or vice-versa.

5. Make your test questions, test directions and assignment descriptions as brief and as clear as possible. Simplify your sentence structure and vocabulary level so that even the poorest reader in your class is measured on their accomplishment of course objectives and not on their understanding of vocabulary or English

grammar. Provide examples of tests, test questions, and successfully completed assignments to increase the clarity of your expectations.

6. Consider providing students with a study guide for each test.

7. Clearly describe your definitions of cheating and plagiarism at least a few days before the first graded assignment or test is scheduled. Tell students why such behavior is not appropriate and spend your time on test days or grading days obviously (but pleasantly) guarding against these problems. Monitor your test periods obviously and alertly, but quietly and unobtrusively (don't nervously jingle your change or keys). Many students who do not cheat resent teachers who permit other students to cheat.

8. Write your answers to each test question before you produce the final version of a test. Questions that you cannot answer easily or score unambiguously may be poor questions. Consider asking a trusted colleague to read and evaluate your questions or assignment directions before you present them to the class.

9. Correct and return tests and assignments as soon as possible. However, do not return corrected tests until you have carefully read the answers of several of your better students to ensure that you have not miskeyed an objective question or asked unclear or inappropriate questions on any test or assignment. It is much less embarrassing to correct and adjust for your errors before you return tests or assignments to your classes. Identify the most common errors made by students. Correct poor questions for possible use in the future.

10. Briefly discuss the most common errors or misconceptions and reteach poorly taught lessons; make appointments to individually discuss idiosyncratic errors or problems; and attempt to devise some

system by which students are asked (and credited for) correction and remediation of their own most common or most serious errors. Even end-of-term, summative tests and assignments should lead to subsequent improvement. Consider providing a written explanation of the reasons underlying correct or successful choices or accomplishments--especially for the more difficult questions.

11. Guard against personal bias in grading--possibly by scoring all tests and assignments before you identify the name of the student. Have students write their names on the backs of tests and assignments.

12. Devise a grading system that permits and rewards improvement throughout the academic term.

13. Create a grading system that promotes cooperation and reduces competition among students. Attempt to encourage students to assist one another in learning and in correcting errors or misunderstandings. A grading system in which there is no arbitrary limit placed on the percentage or number of higher grades is more likely to reduce competition--and may permit cooperation, peer-tutoring, group learning and similar useful procedures.

14. Interview students who initially achieve poor grades to assist them to identify their problems, overcome them, and achieve greater success.

Specific Tests and Assignments

Grades usually come from combining the results of objective tests, short-answer tests, essay tests, problem tests, homework, lab work or classwork, and major assignments (essays, papers, projects, performances).

Objectively scored questions, usually multiple-choice questions, are: (1) hard to construct but easy to score; (2) usually take a minute per question for slower students to complete; (3) tend to produce skim study rather than more organized study; (4) are useful as reflectors of general understanding of facts and ideas; (5) can be found in Instructor Guides of assigned texts and similar texts; (6) are often text-specific; (7) usually earn one point per question; and (8) may need to be simplified to reduce reading problems.

Short-answer questions (usually requiring a word, number, definition, description, short list, or brief set of examples): (1) are useful for testing specific understanding of facts or procedures; (2) should be clearly written to elicit only the type (year, last name, whole sentences) of answer expected by the teacher; (3) can be scored quickly but not mechanically; (4) usually earn one point each but may be scored as 0, 1, 2 or 3 points depending upon accuracy or completeness; (5) may produce somewhat more organized study; and (6) may be found in texts or Instructor Guides.

Longer Essay or Problem Questions: (1) may be used to reflect deeper levels of understanding; (2) are time-consuming to construct (but their tests have fewer questions and are, therefore, easier to construct); (3) are difficult and time-consuming to score in a fair and consistent manner; and (4) are usually scored via use of a checklist or a rating scale that lists and clearly describes the major scoring criteria. The rating scale or checklist should be provided to students in advance--if possible.

Homework, classwork, some labwork and class participation (if graded) are usually scored as if they were short essays that could be

rated on a 0 (not done), 1 (poorly done), 2 (adequate), or 3 (well done) point system.

Major Assignments, such as essays, papers, projects and performances, are usually scored through use of checklists or rating scales. If these assignments represent a considerable amount of student effort, students should be assisted to produce successfully accomplished results through use of a variety of pre-production activities. These activities could include brainstorming (concerning topics, criteria, and types of products or performances); individual or group production of trial or partial versions according to clear guidelines; group and/or teacher use of the rating scale to evaluate trial or partial or practice versions of the final project or performance; and the provision of a range of examples of successful outcomes. The more the activity is practiced and clarified in advance, the better the final results will be--and the easier and more pleasant it will be to grade them.

Grading. A wide range of textbooks and manuals are available to suggest various grading systems. Perhaps the simplest system involves: (1) scoring everything on a Percent Correct Basis (95%, 90%, 85%, etc.); (2) weighting and averaging the results; and (3) assigning the grades on a pre-established basis (92% and up equals an A, etc.). This system is used in many high school classes and is generally understood by most students. The teacher may have to modify the results from poorly constructed tests or assignments, and the weighting of different types of assignments may present some difficulties.

The Contract Systems involve giving predefined grades to students that meet all major course objectives (however defined). Students that meet requirements to a lesser degree--or that meet fewer requirements--receive lower grades. A point version of this system assigns point values to all assignments or activities and assigns grades to predetermined ranges of point values. Some assignments may be required and some others may be limited to some maximum number of points.

Curve Grading in which pre-established percentages of students receive specific grades (e.g., 10% to 15% receive "A", 20% to 30% receive "B"; 30 to 50% receive "C"; 5% to 20% receive "D" grades) may be fairer in multi-section classes, but may reduce motivation for the poorer student, while tending to promote competition instead of cooperation. Warning and Suggestion: Failing grades should be assigned to students who fail to meet the minimal course requirements BUT NOT to any pre-established percentage of students.

Summary

Students may learn more if they are asked: to review previous lessons; to provide information about their attitudes toward or understanding of upcoming lessons and to summarize or expand upon the lessons just completed. Teachers may improve their instruction by asking students or others to provide a few, simple, possible suggestions for improvements. Although evaluations of students or teachers may be used to "grade", evaluation should be used primarily to improve learning by students and their teachers.

Bibliography

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Appendices

The following appendices include:

1. A scale for evaluating essays and papers.
2. Examples of: class description pages for two classes; a Student Information form; and a post-class Recommendation-Information form.
3. A summative ratings sheet used by the EDFI Department, the Firelands Branch Campus and other units or individual faculty. It is intended for end-of-term use with questions 6, 7 and 8 designed to form an overall summative evaluation of the teacher for personnel purposes. Questions from the form may be adapted for mid-term, formative use--and at least one BGSU faculty member uses some of the question after most/many formal presentations.

A Simple Checklist for Evaluating Essays
(from Moss and Holder)

<u>Major Focus: Central Idea or Message</u>	Yes	?	No
1. Does the essay address the major issue?			
2. Is there a clear, central idea or message?	Yes	?	No
3. Are the major dimensions of the central idea addressed?	Yes	?	No
4. Is the importance or implications of the central idea addressed?	Yes	?	No

Comments:

<u>Organization/Focus</u>			
5. The structure or pattern of the paper is clear.	Yes	?	No
6. The paper has an Introduction	Yes	?	No
a Development	Yes	?	No
a Conclusion	Yes	?	No
7. Each paragraph is coherent.	Yes	?	No
8. Transitions from idea to idea are clear and logical.	Yes	?	No

Comments:

<u>Mechanics</u>			
9. Sentence structure is correct.	Yes	?	No
10. Sentences are clear and avoid awkwardness.	Yes	?	No
11. Verb-subject agreements are generally correct.	Yes	?	No
12. Pronouns are used correctly.	Yes	?	No
13. Modifiers are used correctly.	Yes	?	No
14. Word usage is acceptable.	Yes	?	No
15. Spelling is accurate	Yes	?	No
16. Punctuation is appropriate.	Yes	?	No

Comments:

<u>Evidence-Facts</u>			
17. Statements are accurate.	Yes	?	No
18. Opinions are supported adequately.	Yes	?	No
19. Sources are identified and referenced adequately.	Yes	?	No

Comments:

General Strengths:

General Weaknesses:

Suggestions for improvement:

Student Information
(Please complete)

302-402-596-597- _____

Fall-Spring-Summer _____

Last Name _____ First Name _____ SS# _____

Campus Address _____ Campus Telephone # _____

_____ Campus Mailbox # _____

Home Address _____ Home Telephone # _____

Major(s) _____ Minor(s) _____

Teaching Experience (Most recent to least recent -- include tutoring and student teaching if appropriate)

Years:

Experience:

Related Experience

Other Work Experience

Sports - Hobbies - Interests

List other classes you are now taking (give class name and teacher name).

- 1.
- 2.
- 3.
- 4.

Describe current work/job/athletic activities and obligations.

On the back:

1. In general, what do you hope to learn while in this class?
2. List and briefly describe two or three possible research questions or areas of interest (or educational questions or issues) that interest you.

STUDENT INFORMATION (Please complete and return--today)

1. Date: Month _____ Year _____ Day _____
2. Course Number: EDFI _____ Social Security # _____
3. Names: First _____ Middle _____ Last _____
4. What name do you wish to be called in class? _____
5. Campus/Work Address: _____ OCMB# (if any) _____
6. Campus/Work Telephone Number _____ Home Telephone # _____
7. Home Address: _____
8. Current Major(s) _____ Minor(s) _____
9. Undergrad/Former Majors, Minors (if any) _____
10. How many classes are you taking this term? _____ Semester Hours? _____
11. Name the classes you are taking this term:
 1. _____
 2. _____
 3. _____
 4. _____
 5. _____
12. Teaching (include tutoring, student teaching, etc.) Experience (most recent to least recent).
Year(s) _____ Experience: _____
Year(s) _____ Experience: _____
Year(s) _____ Experience: _____
Year(s) _____ Experience: _____
13. Other Related and/or Work Experiences: _____
14. Sports, Hobbies, Interests: _____
15. Do you now teach? Yes No Plan to teach? Yes No
Grade levels _____ Subjects _____
16. Describe (include days and times) current work/job/athletic activities and obligations. _____
17. Number of statistics classes taken? _____ Computer courses? _____ Testing classes? _____
18. What computer(s) do you own or regularly use? (Circle) None Mac Apple II IBM/clone
Other _____
- If a graduate student: Undergrad. college(s) _____
Major(s) _____

Do you plan to write a thesis? Yes No Possible topic/title _____

On the back, describe: (a) yourself; (b) how you learn best; (c) your special goals or expectations for this class.

jgal/2

EDFI 597: Educational Research

Texts:

L. R. Gay. Educational Research (3rd edition), 1987, Merrill.

Publication Manual of the American Psychological Association (3rd edition), 1986, APA.

Catalog Description:

Research in Education (3). Identification and evaluation of research problems, research designs, use of library resources, data gathering and writing research reports. Prerequisite: EDFI 596.

Teacher:

Peter Wood	Office phone: 419-372-7329
543 Education Building	Home phone: 419-352-7614
Mailbox: 550 Education Building	
Mailing Address: EDFI Department, BGSU, Bowling Green, OH 43403	

Grading:

Course grades will be derived from weekly or bi-weekly quiz scores (90+ = A; 80 = B; 70 = C) and a final project. The final project will be a completed research report suitable for publication in ERIC/RIE or a journal in your field. Attendance, class participation, assistance provided to classmates, and completion of assigned activities will be expected and may be used to modify the course grade.

Course Topics:

General Introduction to Educational Research (rationale, types of research)
Sources of current and previous research and research methods
Creation of research hypotheses and plans
Selection and description of a research sample and research subjects
Selection and analysis of measuring instruments
The Descriptive approach to research and its associated statistics
The Correlational approach to research and its statistics
Causal-Comparative (post facto) research; non-experimental comparisons
Experimental-Comparative research
Inferential Statistics used in comparative research (t , F , chi square, etc.)
Pre and post analysis of data
Using the computer for data processing
Preparation and evaluation of the research report
Publication of the research report

NOTE: We will also learn to process data via hand-calculation and via the SPSSX computer package available on the BGSU mainframe.

TERM PROJECT

Each student in EDFI 597 is expected to be able to demonstrate understanding of the educational research process by completing a RESEARCH PROJECT suitable for acceptance by an educational research journal or by ERIC's Resources in Education.

Due Date: The last class period before exam week. An outline of the report will be due the seventh week.

Number of Copies: Two error-free, typed copies of the report will be submitted. The report will be accompanied by a typed letter of submission, and, if to ERIC, by a complete and signed ERIC permission form. Each copy also will include a complete abstract/summary similar to the abstract required by ERIC.

Rating Sheet: Each report also will be accompanied by a Report Rating Sheet that represents each author's evaluation of the report.

Joint Authorship: Reports may be authored by one, two, or three authors. Multi-authored reports will be accompanied: by multiple copies of the rating forms (each signed); by appropriately signed permission forms; and by a separate, signed, and brief description of the contributions or functions of each of the authors.

Types of Reports: Previous reports have been:

(1) simple correlational studies in which available data (e.g., #'s of absences vs. high school student GPA; knowledge of procedures vs. ratings of actual performance; measures of attitude vs. measures of cognitive or performance achievements) were gathered or produced to test some hypothetical relationship; (2) descriptive studies in which teachers or others described particular teaching or tutoring sequences (case studies); (3) descriptive studies presenting the results of questionnaire and/or file data; (4) descriptive studies in which the author gathered materials from a range of sources and summarized the results and their implications; (5) studies describing the trial use of one or more instruments or teaching procedures (often as precursors to a more complete study at a later time); (6) secondary analysis of data or studies previously gathered or reported by others; (7) results of relatively simple experiments; or (8) other studies of interest to the author.

Attachments: A list of ERIC Clearinghouses, a description of the ERIC system, an ERIC permission form, an outline of the ERIC abstract page, a partial list of educational journals, and an article rating form will be distributed in a later class.

References/Style: Use the Article Rating Scale; the Graduate College's Thesis and Dissertation Handbook and the Publication Manual of the APA.

EDFI 596: EDUCATIONAL STATISTICS
Mondays, 6:00-9:00 p.m.

TEXT:

Statistics for the Behavioral Sciences (2); Gravetter and Wallnau; West Publishing Company, 1988.

CATALOG DESCRIPTION:

Statistics in Education (3). Statistics as a tool in education and research, descriptive statistics, transformation of scores, sampling and probability, linear correlation and regression, introduction to statistical inference, and basic tests of significance.

TEACHER:

Peter Wood, 543 Education Building, (419) 372-7328 (office); 352-7614 (home).
Mailing address: EDFI Department, BGSU, Bowling Green, OH 43403. Office mailbox is in Room 550 Education Building.

COURSE TOPICS:

1. Introduction, basic math review, population and samples, measurement scales, notation.
2. Frequency Distributions
3. Central Tendency
4. Variability
5. Derived scores: z scores
6. Probability
7. Probability and Distribution of sample means (and medians)
8. Hypothesis Testing
9. Estimation, Directional Tests, Power
10. "t" tests: Introduction
11. Independent "t" tests
12. Repeated measures "t" tests
13. Analysis of Variance (ANOVA)
14. Repeated Measures ANOVA
15. Use of the Computer for Statistics
16. Choice of the appropriate statistical procedures.
- 17-18. Nonparametric Tests (Chi Square, Mann-Whitney, Wilcoxon, Spearman, Kendall)

GRADING:

Course grades will be derived from frequent quiz scores (90=A; 80=B; 70=C) and a final examination, attendance, class participation, and satisfactory completion of end-of-chapter problems will be expected and will be used to modify the course grade.

PROJECTS AND PAPERS:

None

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COURSE SYLLABUS

Academic Year

Course: Educational Statistics (EDFI 596)

Credits: Three Semester Hours

Professor: Dr. Robert Yonker
Room 521 Education Building
Phone 372-7317

Textbook: Gravetter, F. J. & Wallnau, L. B. (1988). Statistics for the Behavioral Sciences. S. Paul: West.

Course Goal: Given a data analysis situation, the student will be able to select an appropriate data analysis technique, develop a computer program utilizing the SPSS^x language that will perform the desired analysis, and correctly interpret the output produced by the computer program as it relates to the original data analysis situation.

Policies:

Policy 1: It is expected that the student will be present for every scheduled class.

Policy 2: It is expected that all assignments will be completed prior to class and that the student will make meaningful contributions to class discussions.

Policy 3: A grade for the course will be assigned as follows:

- A: 85% of total points
- B: 70% of total points
- C: 55% of total points
- D: 40% of total points

Policy 4: The maximum number of points to be awarded for each criterion upon which a grade for the course will be determined is as follows:

<u>Criterion</u>	<u>Max. Pts.</u>
Examination #1	100
Examination #2	100
Examination #3	100
TOTAL	300

Recommendation Information

Please provide the following information (to permit me to write a more complete recommendation). Return this form to my office (543 Education Building) or to my mailbox (EDFI Department, BGSU, Bowling Green, OH 43403) -- which is in Room 500 Education. Thank you.

Your Last Name _____ First Name _____

SS# _____ Telephone # _____

When/Where/How did we meet? If in class, name the class(es), term(s), and your grade(s).

For what types of positions are you most likely to use this recommendation?

List/Describe your most positive qualities.

Describe activities or work or projects you have completed (most at BGSU) that illustrate your responsibility, enthusiasm, organization, initiative or other positive qualities.

Your current address:

Who gets this recommendation (name, title, address)?

Deadline?

STUDENT DESCRIPTION OF TEACHING
Data Form

Important! You must complete this information.

Instructor's Name _____

Department _____

Course Number _____

Section Number _____

Directions to the Instructor:

The Student Description of Teaching Form should be administered during one of the regular class meetings (not during the final exam).

If you have your own questions that you wish to add to the Student Description of Teaching form, START numbering the additional items with number 33 and finish with number 120. Also, inform the proctor to instruct the students to respond to your items beginning with number 33 on the answer sheet.

1. Identify a student in your class to act as Proctor For the evaluation.
2. Give the forms, answer sheets, and some pencils to the Proctor.
3. Leave this Data Form with the Proctor.
4. Write your name, department, course number, and section number on the blackboard.
5. Leave the room while the proctor administers the evaluation.

Directions to the Proctor:

1. Distribute the forms and the answer sheets to all students in the class.
2. Instruct the students to write the teacher's name, course number and section number at the top of the answer sheet.
3. Instruct the students NOT to complete the name section on the answer sheet.
4. Make sure each student uses a pencil to complete the answer sheet.
5. Collect the forms and the answer sheets when the students are finished.
6. Place the forms, the answer sheets and the Data Form (this sheet) in the envelope.
7. Return the envelope to EDFI, 550 Education Building in person or by Campus Mail.

STUDENT DESCRIPTION OF TEACHING

Use these numbers to describe the instructor:

- 1 = Below Average
- 2 = Average
- 3 = Above Average (best 50%)
- 4 = Better than Most (best 30%)
- 5 = Superior (top 10-15%)
- 6 = One of the Best - Equal to any Previous Teacher
- 7 = The Best - Better than any Previous Teacher

Be sure to use PENCIL to mark your answer sheet.

1. SCHOLARSHIP (Has command of the subject, contrasts various points of view, discusses recent developments in the field, presents origins of ideas and concepts.)
2. ORGANIZATION/CLARITY (Explains clearly, is well prepared, presents material in an organized manner.)
3. INTERACTION WITH GROUP (Is sensitive to the reactions of the class, encourages student participation, welcomes questions and discussions.)
4. INTERACTION WITH INDIVIDUALS (Has genuine interest in students relates to students as individuals, respects students as persons, is valued for his advice.)
5. ENTHUSIASM (Seems to enjoy teaching, is a dynamic and energetic person, has an interesting style of presentation, is enthusiastic about the subject, has a sense of humor.)
6. THE INSTRUCTOR
7. THE TOTAL EXPERIENCE UNDER THE CONTROL OF THIS PERSON (Teaching, content, readings, tests, outside activities, seminars, homework,...everything that you associate with this class or lab/section/seminar/group.)
8. STUDENT ACCOMPLISHMENT (The degree to which this class helped you to increase your knowledge, skills and competencies in comparison with other classes you have taken.)

(OVER)

Use these numbers to describe the instructor:

- If not relevant, leave blank
- 1 = Major Improvements Needed
- 2 = Improvement is Needed (is mediocre now)
- 3 = Little Improvement is Needed (well done now)
- 4 = No Improvement is Needed (already great)
- 5 = Extraordinarily Effective Now

Grading Procedures

- 9. FAIRNESS (so far)
- 10. QUALITY OF TESTS
- 11. FAIRNESS IN GRADING OF ASSIGNMENTS
- 12. CLEAR EXPLANATION OF GRADING PROCEDURES

Teachers Ability to

- 13. SPEAK CLEARLY
- 14. LECTURE
- 15. STIMULATE DISCUSSION
- 16. MOTIVATE STUDENTS TO LEARN
- 17. INDIVIDUALIZE INSTRUCTION
- 18. INSPIRE EXCITEMENT AND INTEREST IN COURSE CONTENT
- 19. ASK THOUGHT-PROVOKING QUESTIONS

Activities and Materials

- 20. TEXTBOOKS
- 21. SUPPLEMENTARY READINGS
- 22. MOVIES AND USE OF OTHER AV DEVICES
- 23. EFFECTIVE INTEGRATION OF CLASSWORK AND ASSIGNMENTS

Instructor

- 24. SENSE OF HUMOR
- 25. PREPARATION FOR CLASS
- 26. OPENNESS TO STUDENT QUESTIONS
- 27. RESPECT FOR STUDENTS

Organization

- 28. CLARITY OF OBJECTIVES
- 29. CLARITY OF PRESENTATIONS
- 30. STRESS ON IMPORTANT AREAS
- 31. SUMMARIZATION OF MAJOR POINTS
- 32. EFFECTIVE USE OF CLASS TIME